

Vector-Borne Diseases in California 2003

Vicki Kramer, Ph.D.

Vector-Borne Disease Section

California Department of Health Services

Offices of DHS Vector-Borne Disease Section



Hantavirus



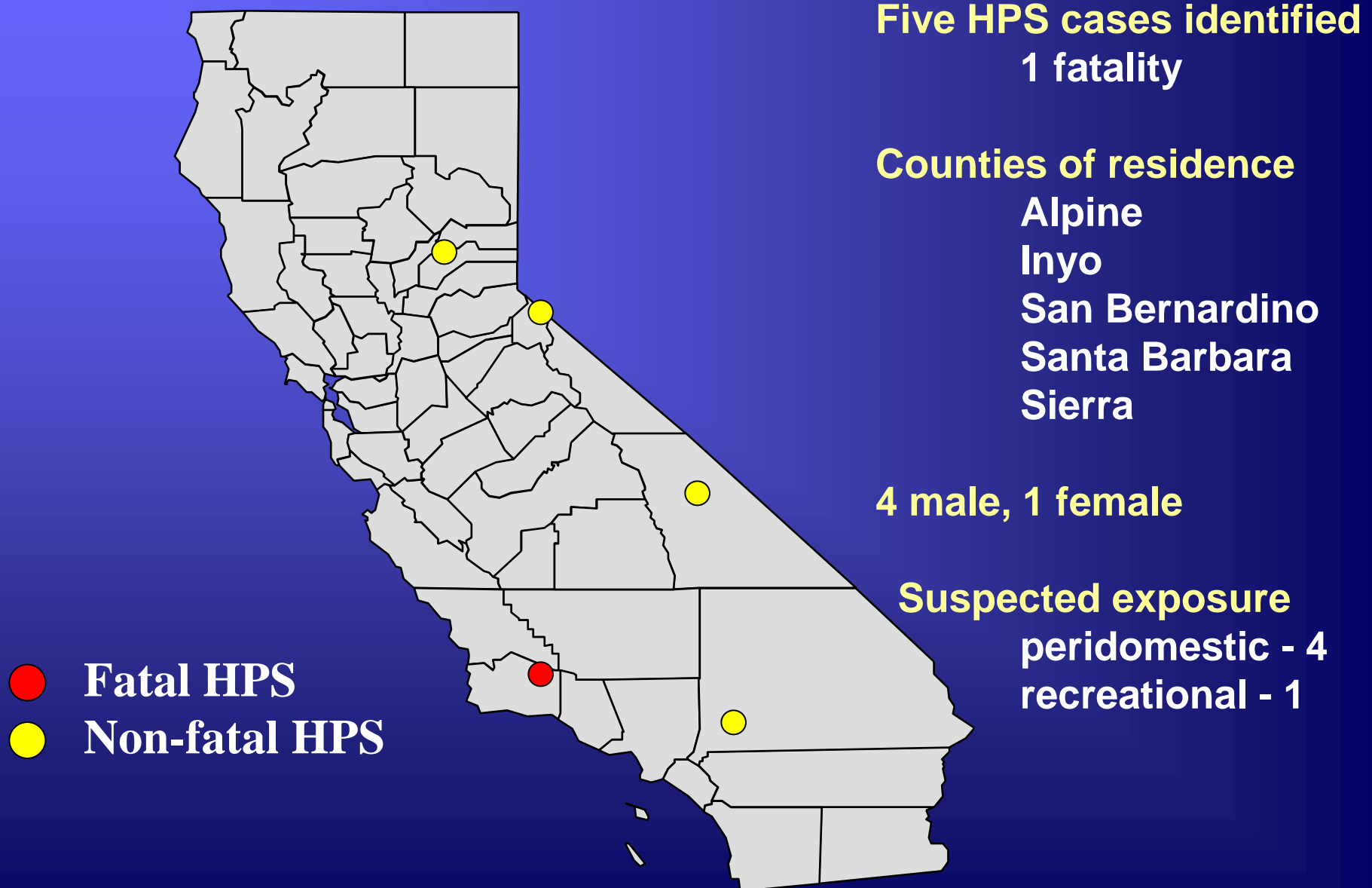
Hantavirus Rodent Surveillance

California, 1975-2003

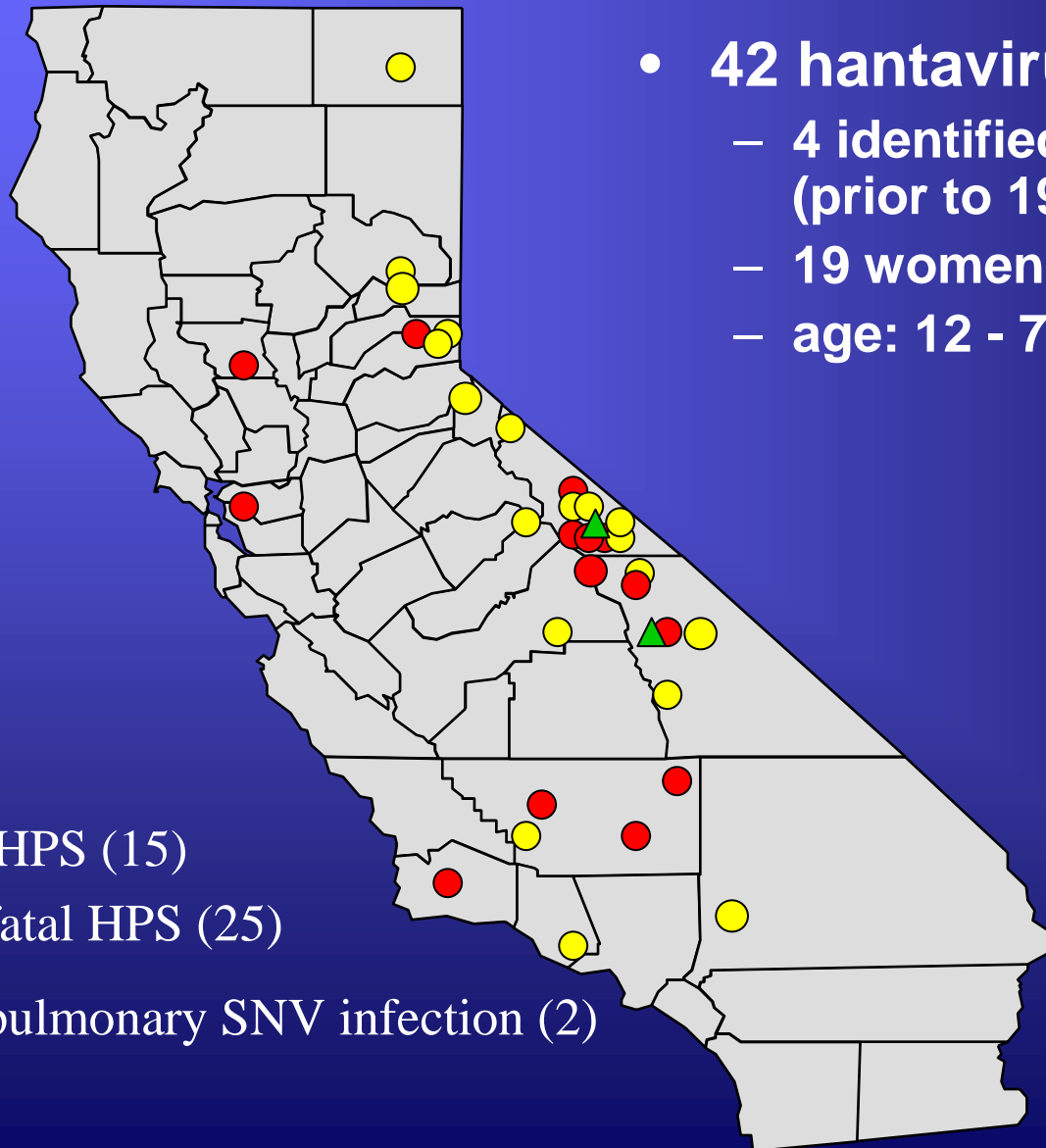
- Over 20,000 rodents and other small mammals collected and serologically tested
 - 43 species from 26 genera

Species	No. tested	No. positive	Percent positive
<i>Peromyscus maniculatus</i>	7251	917	12.6
<i>P. californicus</i>	1761	35	2.0
<i>P. boylii</i>	1612	67	4.2
<i>P. eremicus</i>	1166	55	4.7
<i>P. truei</i>	634	23	3.6
<i>P. crinitus</i>	276	11	4.0

Hantavirus Infections in California, 2003

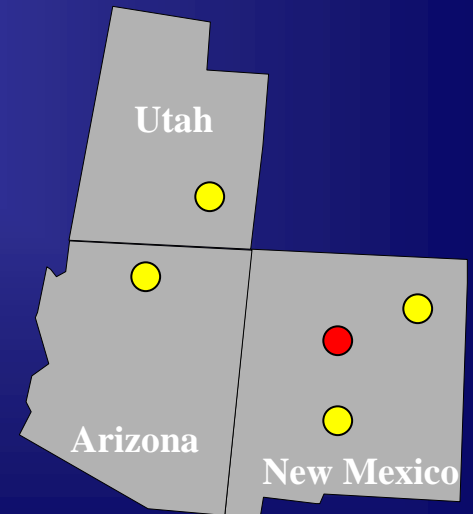


Hantavirus Infection in CA Residents, 1980-2003



- Fatal HPS (15)
- Non-fatal HPS (25)
- ▲ Non-pulmonary SNV infection (2)

- 42 hantavirus infections
 - 4 identified retrospectively (prior to 1993)
 - 19 women, 23 men
 - age: 12 - 74 years

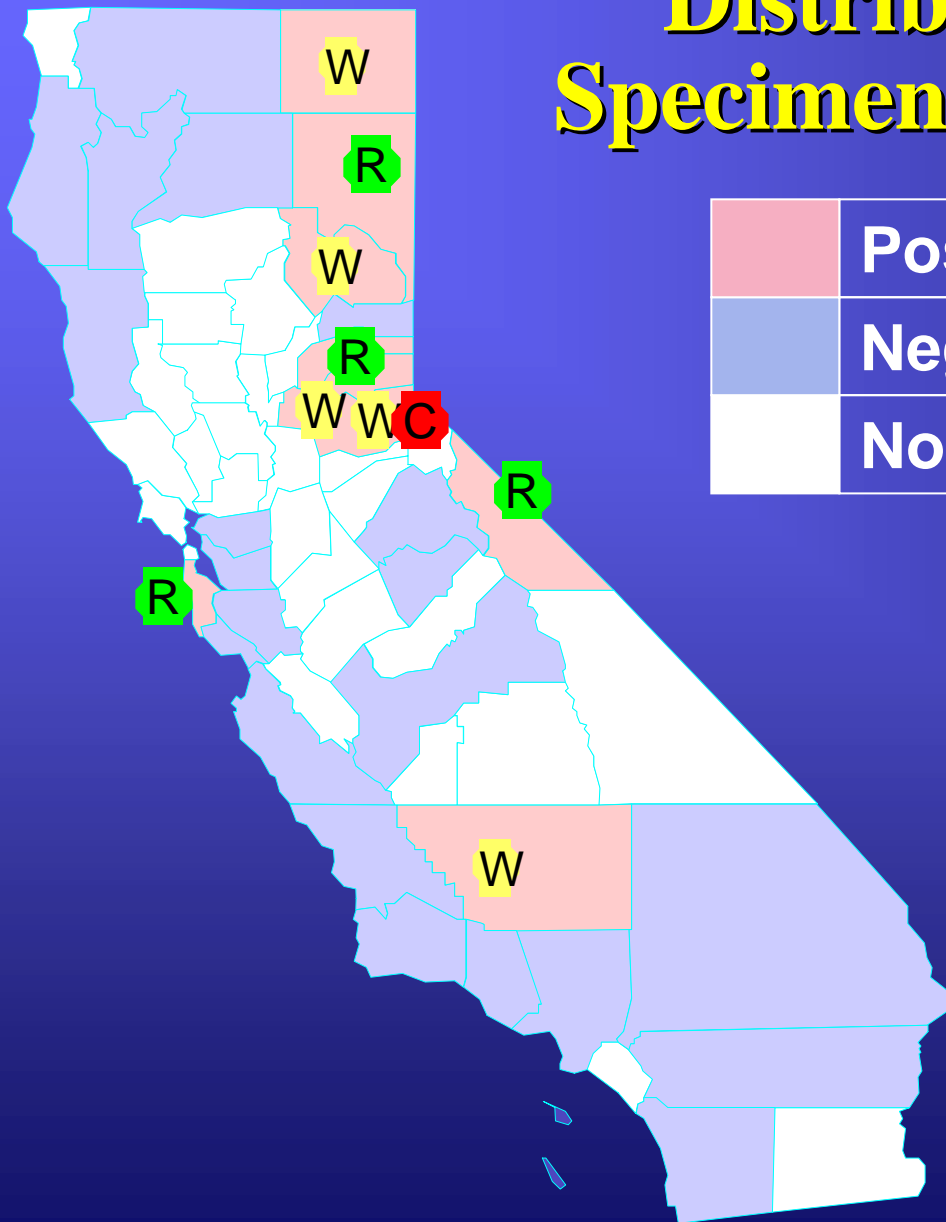


Mapped by suspected site of exposure

Plague



Distribution of Plague Specimens by County, 2003



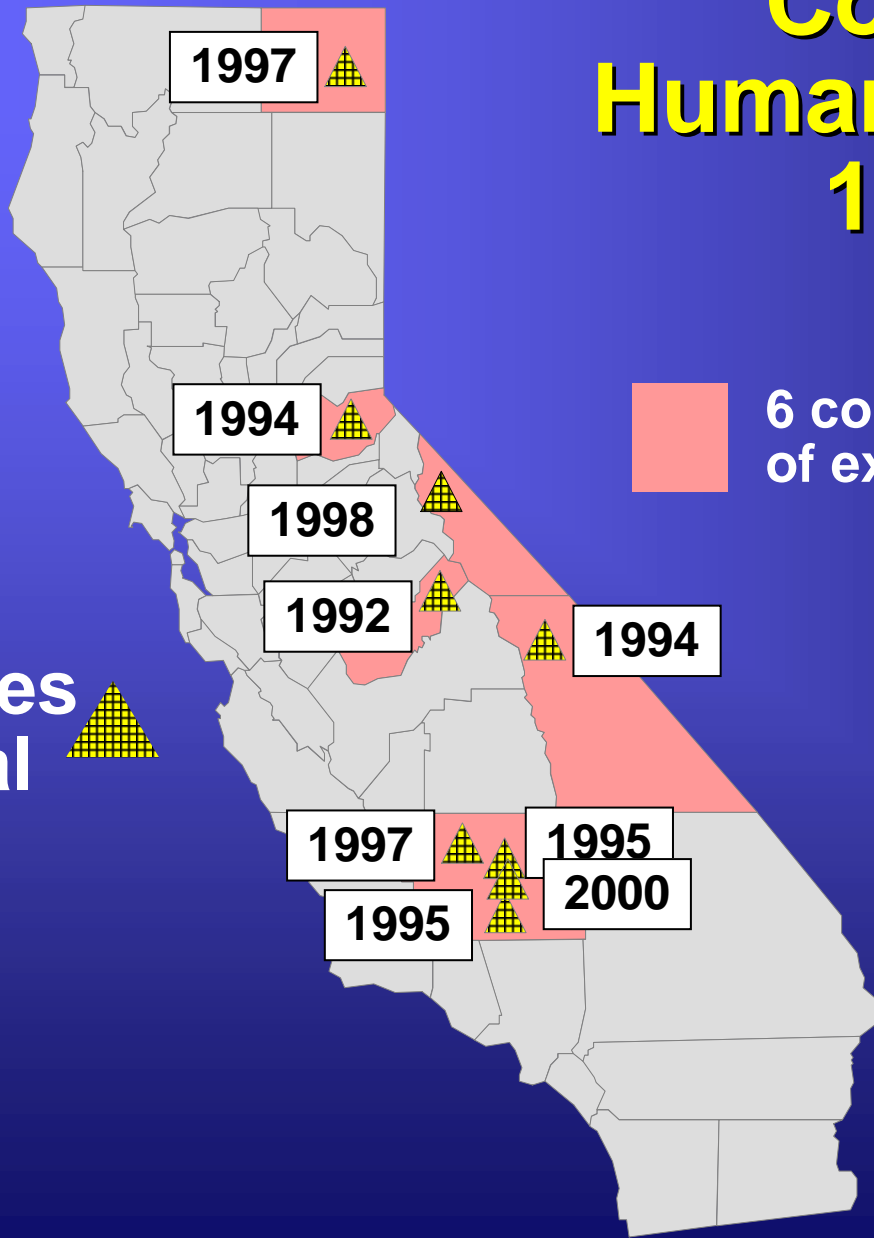
Positive Test Results
Negative Test Results
No Sampling Done

- P** Domestic pet
- C** Rodent carcass
- F** Rodent flea pool
- W** Wild carnivore serum
- R** Rodent serum

9 / 30 counties positive
36 / 1318 specimens pos

Counties with Human Plague Cases 1990 - 2003

9 Cases
1 Fatal



6 counties
of exposure:

Modoc
El Dorado
Mono
Madera
Inyo
Kern

Tick-borne diseases



Tick-borne Diseases in California

Lyme Disease

Ehrlichiosis

Anaplasmosis

Babesiosis

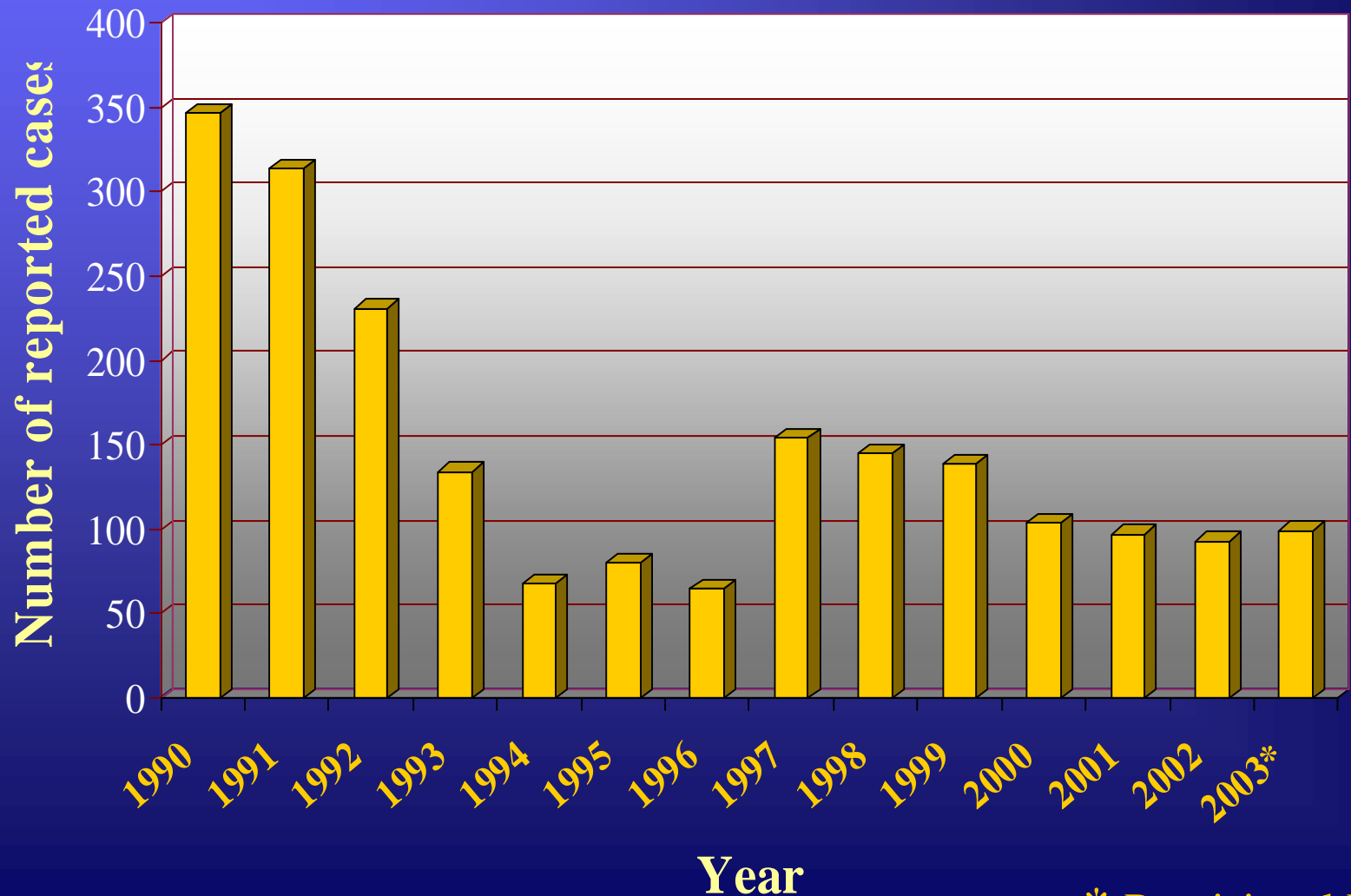
Tick-borne Relapsing Fever

Rocky Mountain Spotted Fever

Tularemia

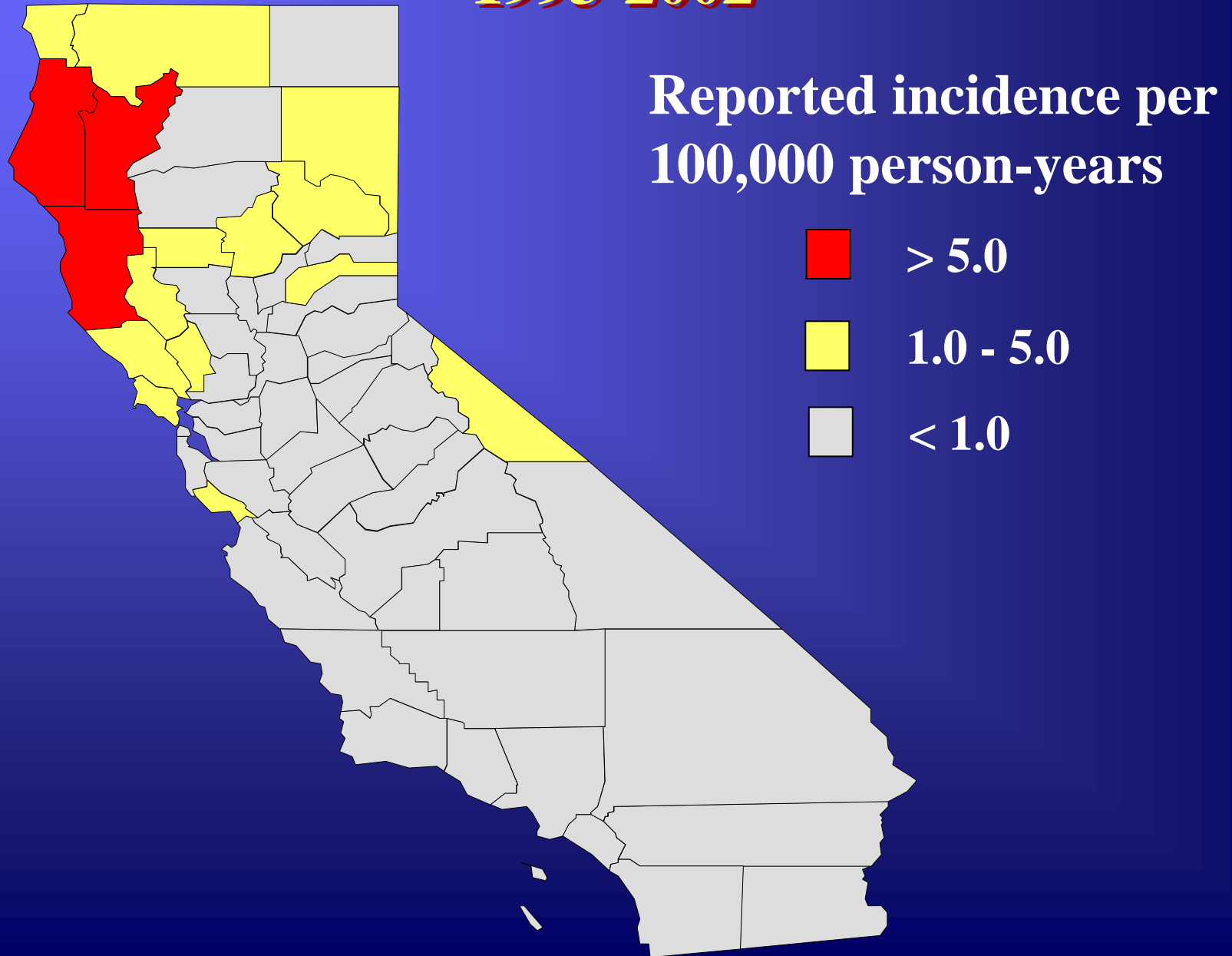
Tick Paralysis

Reported Lyme Disease Cases California, 1990-2003



* Provisional Data

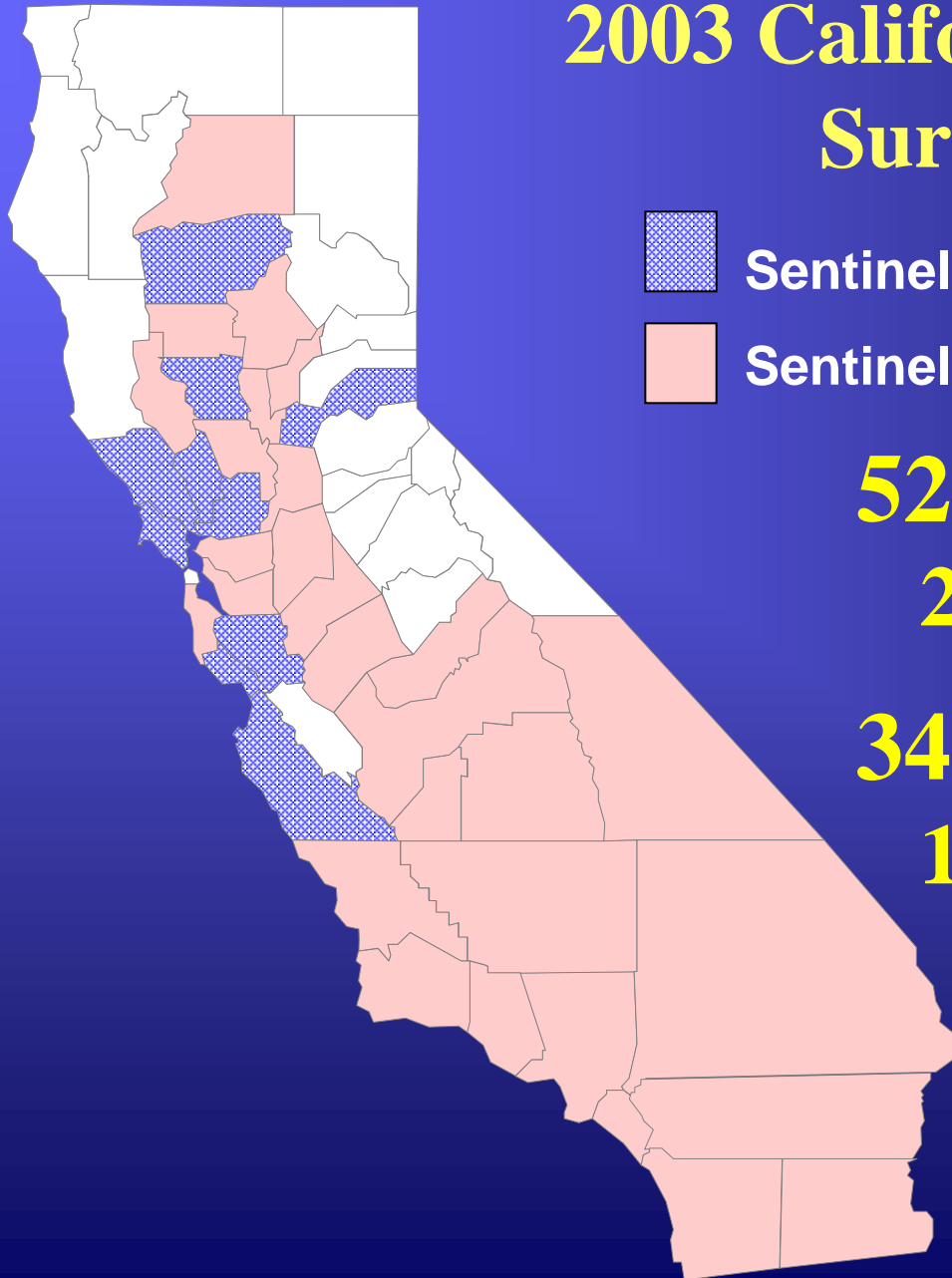
Reported Lyme Disease Cases in California 1993-2002



Mosquito-borne diseases



2003 California Arbovirus Surveillance



 Sentinel flocks
 Sentinel flocks and mosquito pools

52 agencies

226 flocks

34 agencies

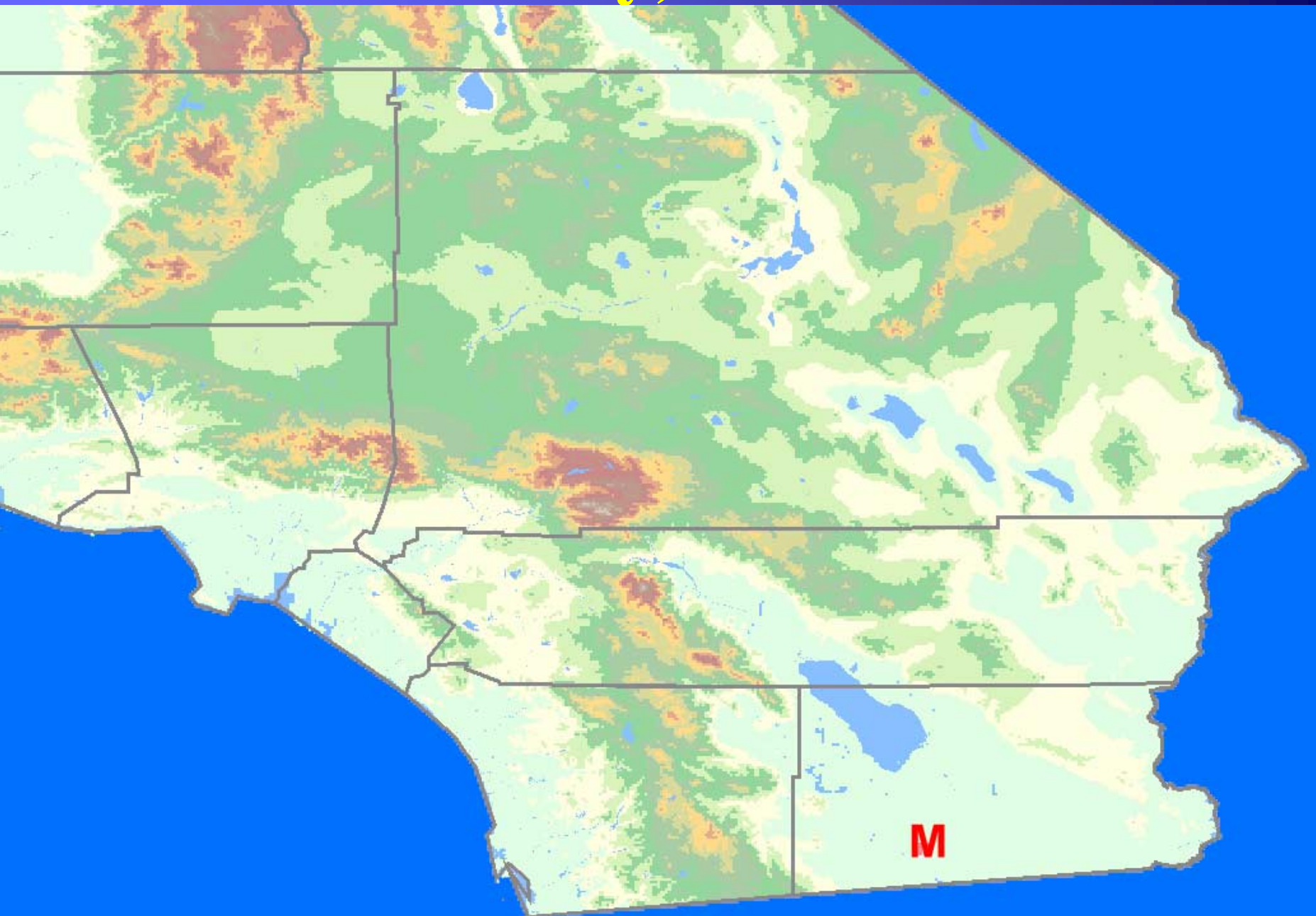
10,111 mosq. pools

West Nile Virus Positive Counties

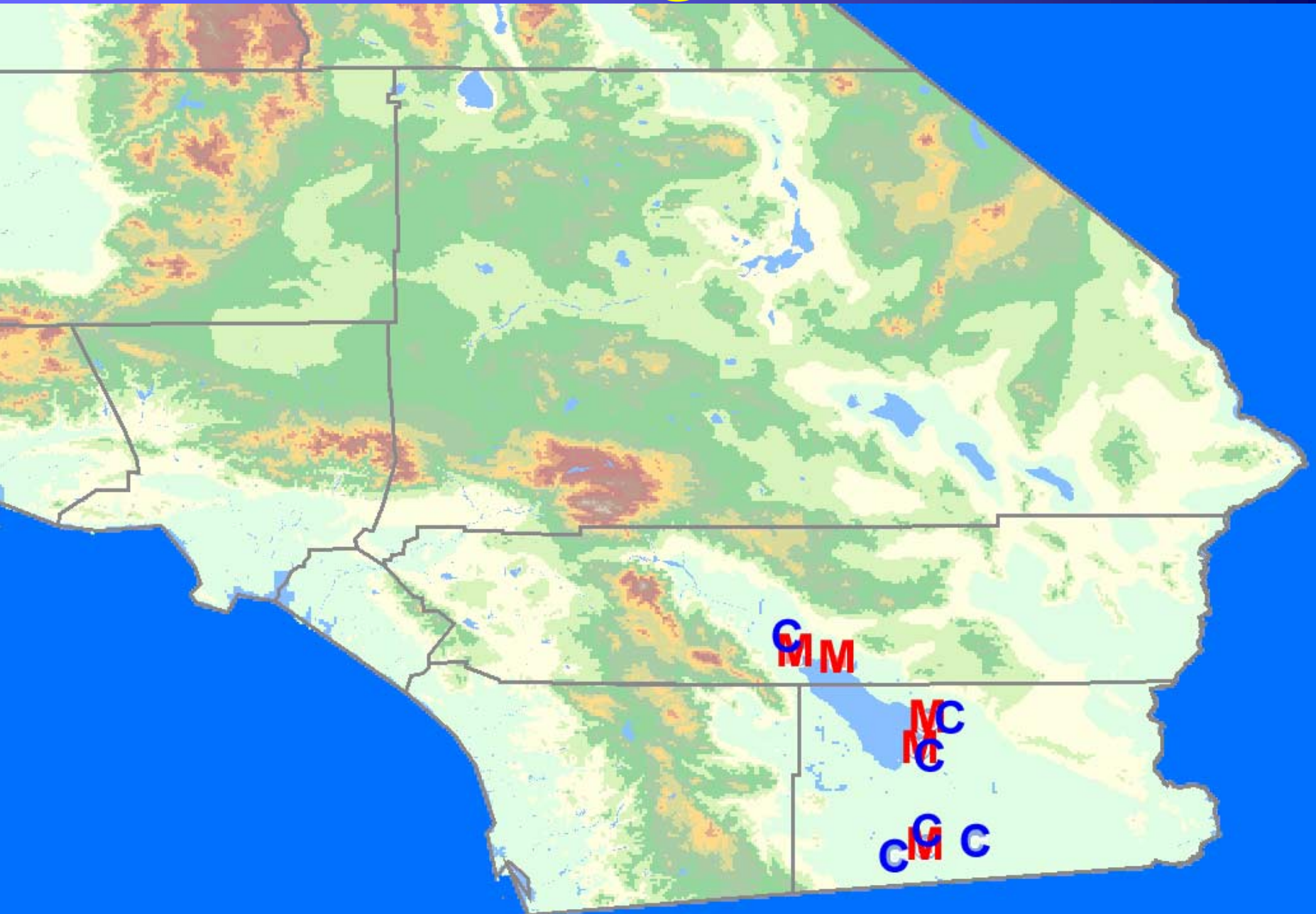
2003

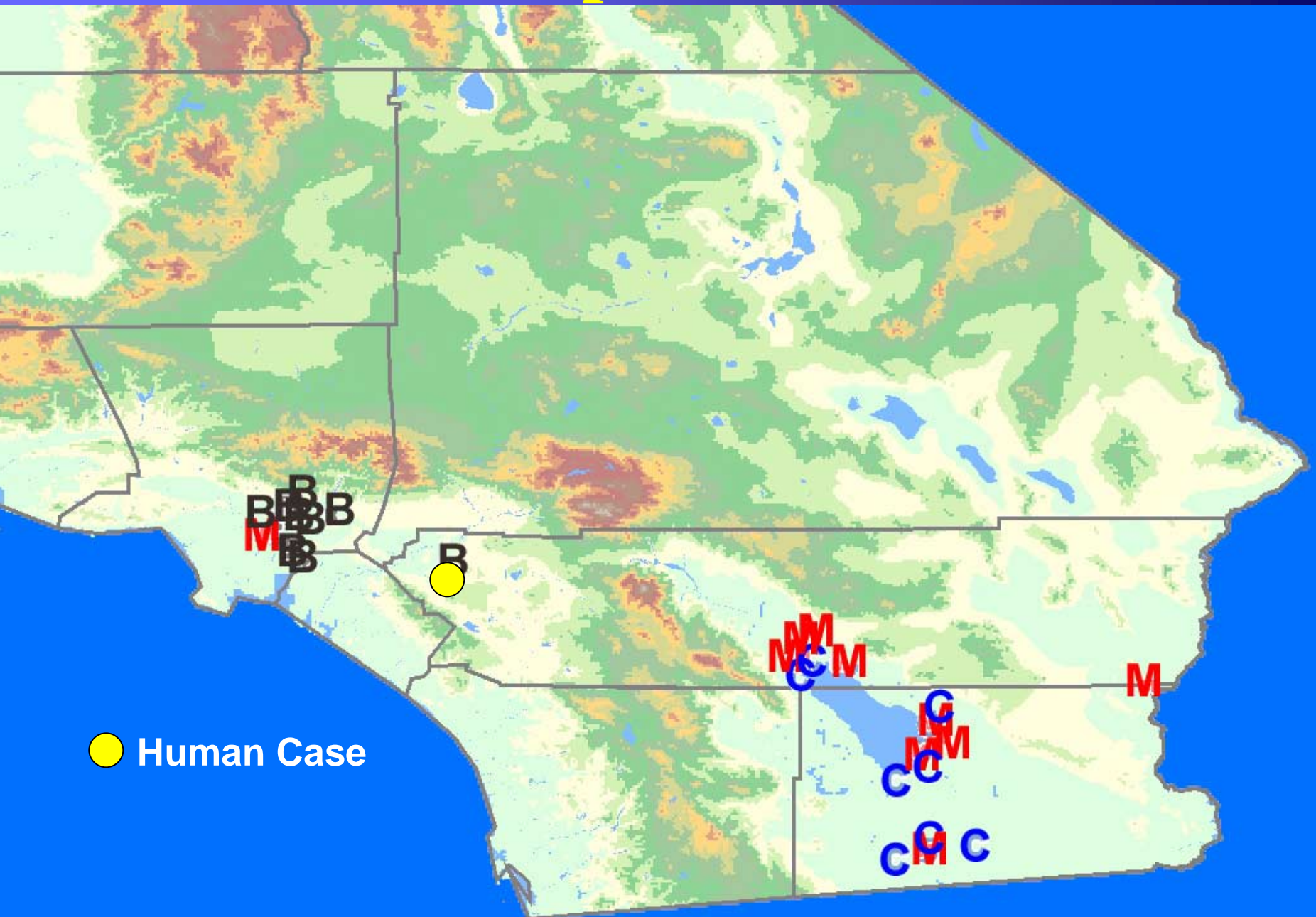


July, 2003

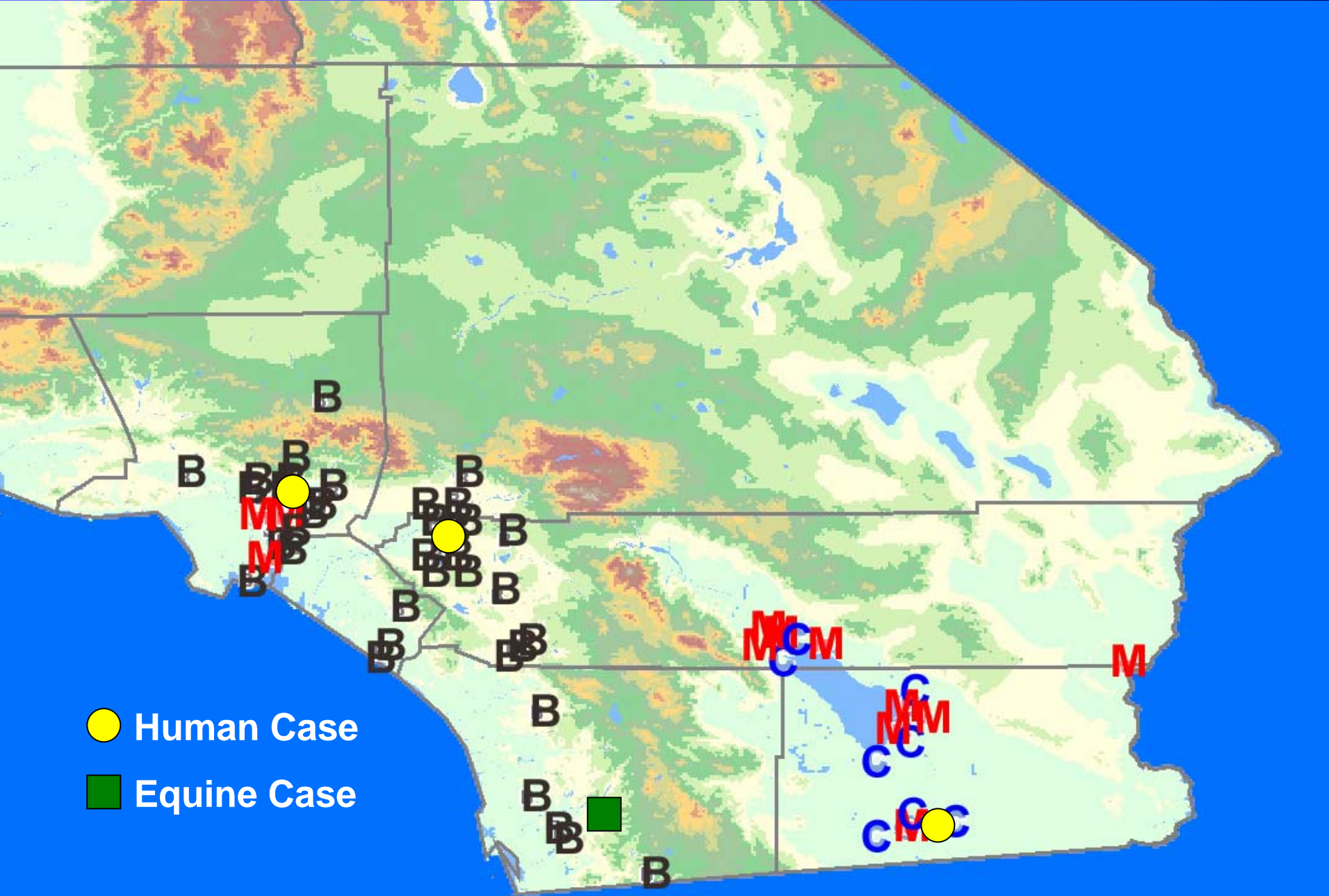


August

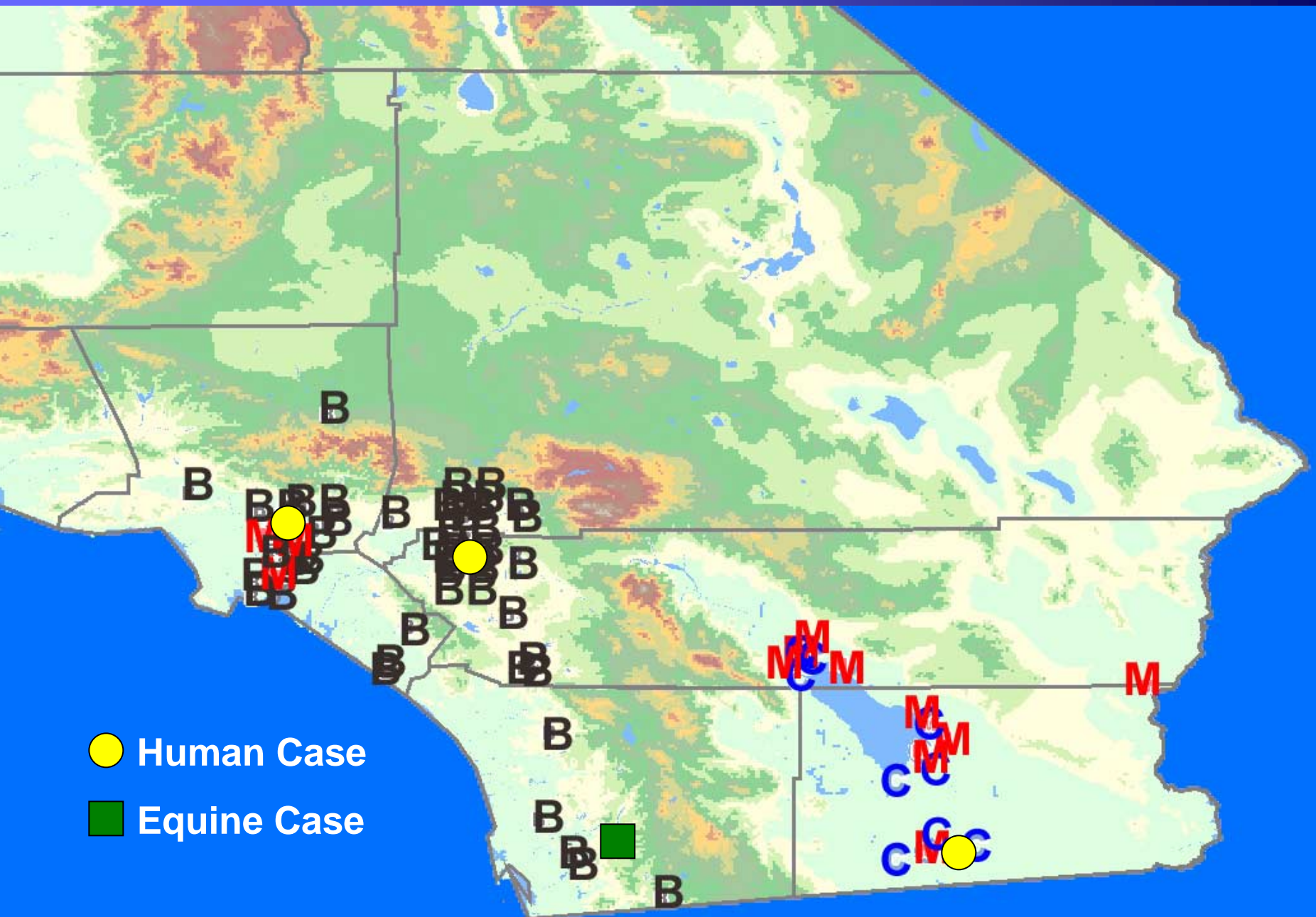




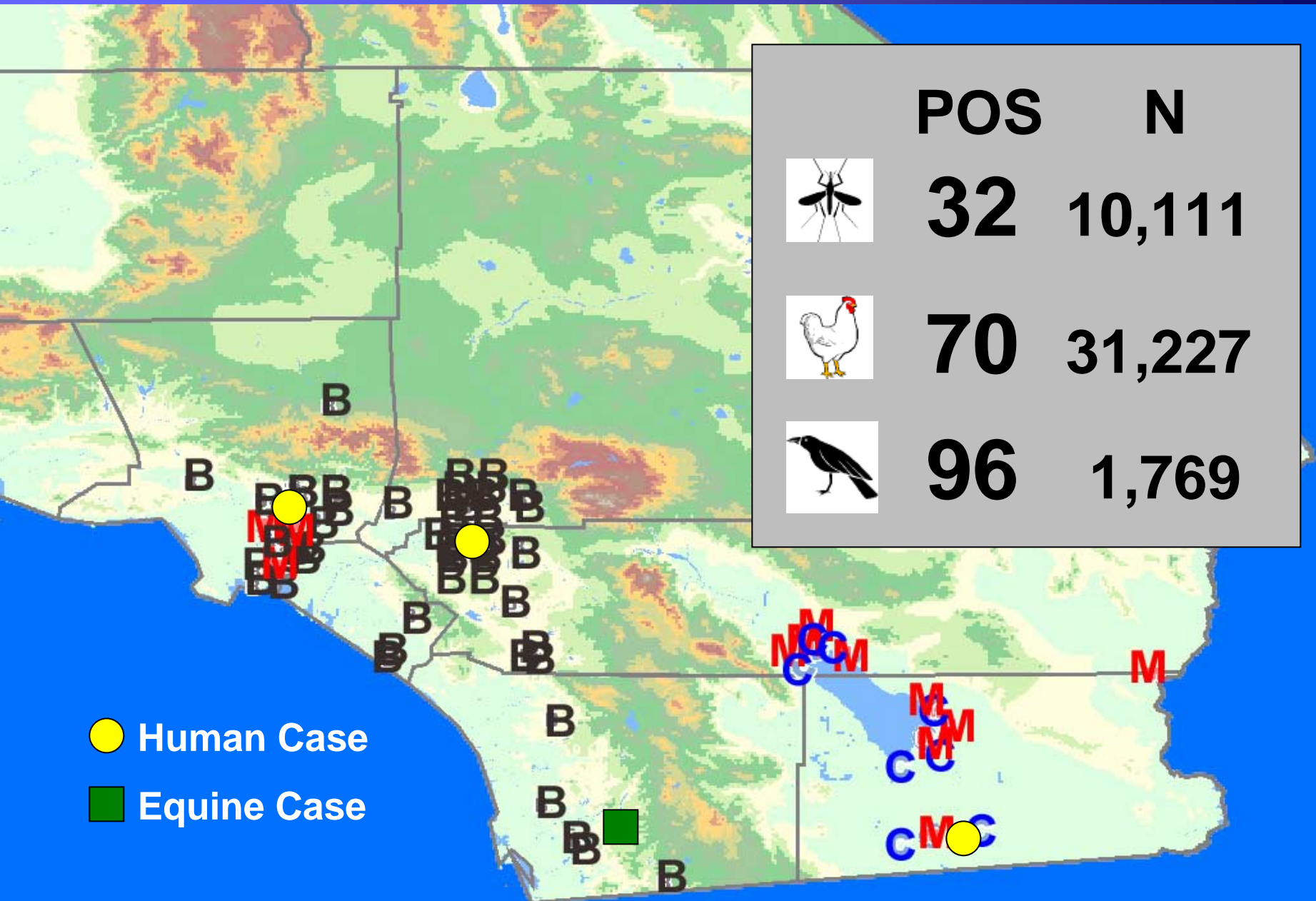
October



November



December



2003 Seroconversions



	<u>SLE</u>	<u>WNV</u>
Agencies	5	2
Flocks	5	9
Chickens	13	70

● SLE

● WNV

2003 Positive Mosquito Pools

	<u>WEE</u>	<u>SLE</u>	<u>WNV</u>
Agencies	1	3	3
Pools	1	5	32



● WEE

● SLE

● WNV

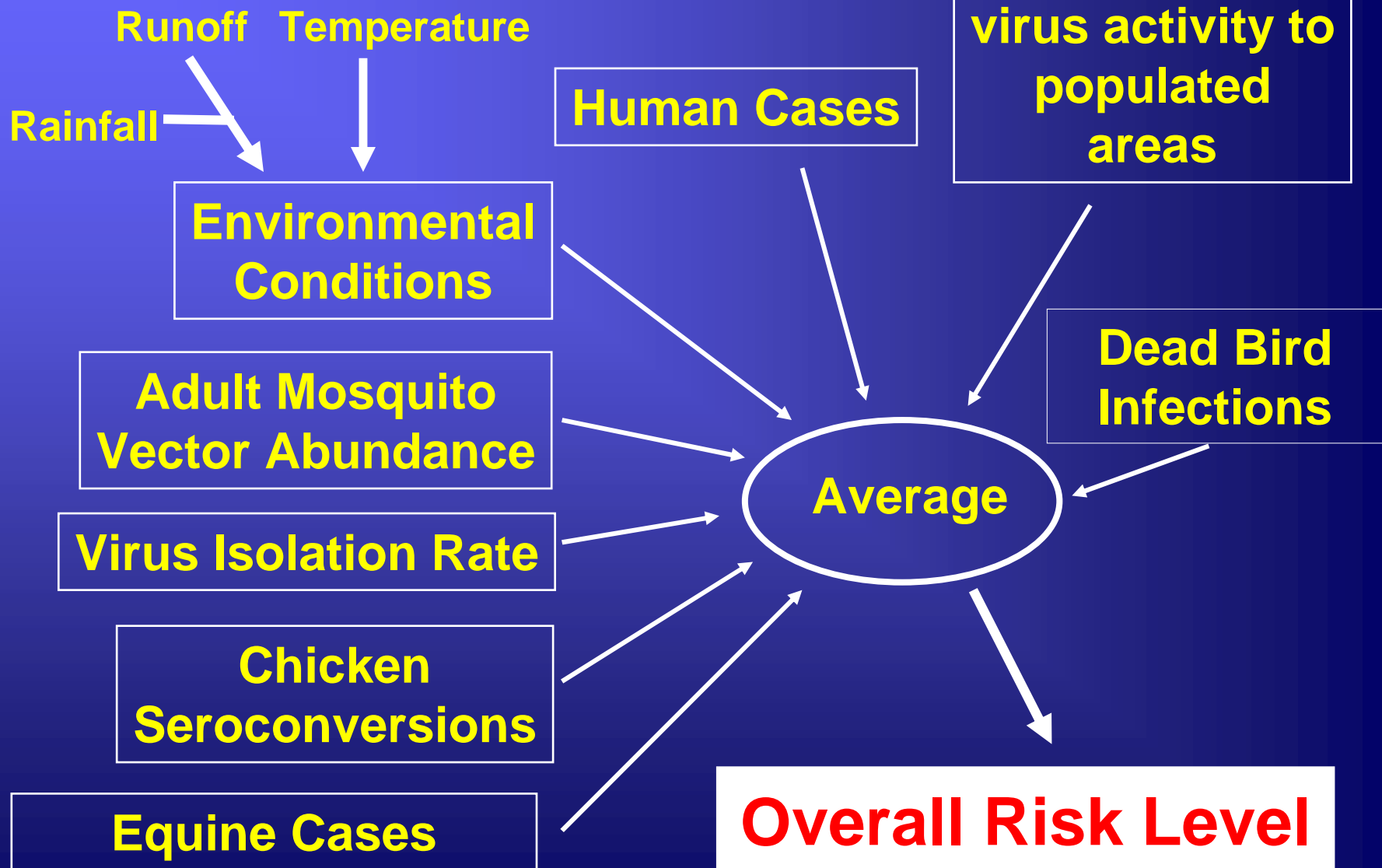
10,111 pools

Documents

- **California Mosquito-borne Virus Surveillance and Response Plan**
- **Operational Plan for Emergency Response to Mosquito-borne Disease Outbreaks**

<http://westnile.ca.gov>

Risk Factors



Risk Factors Rated

Average rating determined for eight risk factors and correlated with response level

Normal season	1.0 to 2.5
----------------------	-------------------

Emergency planning	2.6 to 4.0
---------------------------	-------------------

Epidemic	4.1 to 5.0
-----------------	-------------------

Thanks to:

- Staff of the DHS Vector-Borne Disease Section & Viral and Rickettsial Disease Lab
- Local mosquito and vector control agencies
- University of California